

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-25 (canceled).

Claim 26 (currently amended): A mobile information processor comprising:  
a processor; and

a memory device which stores instructions, which when executed by the processor, cause the processor to:

- (a) search, in a local area, for an external apparatus which can communicate with the mobile information processor, said external apparatus including identification information;
- (b) collect said identification information from said external apparatus;
- (c) acquire user information from a remote user information database based on said collected identification information;
- (d) transmit, to a service provider, the acquired user information, said service provider being configured to determine whether a communication service can be provided based on said transmitted user information; and
- (e) in response to a determination that the communication service can be provided based on said transmitted user information, utilize said communication service.

Claim 27 (previously presented): The mobile information processor of Claim 26, wherein when executed by the processor, the instructions cause the processor to receive the identification information of the external apparatus from a space directory, wherein said space directory:

- (a) stores the identification information of the external apparatus; and
- (b) updates the identification information of the external apparatus.

Claim 28 (previously presented): The mobile information processor of Claim 26, wherein when executed by the processor, the instructions cause the processor to:

- (a) receive the identification information of the external apparatus from a space directory which stores the identification information of the external apparatus; and
- (b) in response to a transmission challenge from the space directory, transmit encrypted data of the challenge created by its own secret key together with a public-key certificate to the space directory.

Claim 29 (previously presented): The mobile information processor of Claim 26, wherein when executed by the processor, the instructions cause the processor to perform Bluetooth wireless communication.

Claim 30 (previously presented): The mobile information processor of Claim 26, wherein when executed by the processor, the instructions cause the processor to periodically collect the identification information of the external apparatus.

Claim 31 (previously presented): The mobile information processor of Claim 26, wherein when executed by the processor, the instructions cause the processor to:

- (a) communicate with a personal directory which stores original data of the identification information of the external apparatus through a communication relay included in the external apparatus; and
- (b) register a position of the mobile information processor in the personal directory.

Claim 32 (currently amended): An information processor comprising:

a processor;

a memory device which stores instructions, which when executed by the processor, cause the processor to:

- (a) perform data communication with: (i) a mobile information processor; and (ii) an external apparatus including identification information;
- (b) collect said identification information;
- (c) acquire user information from a remote user information database based on said collected identification information;
- (d) receive a service request from the mobile information processor;
- (e) determine whether said service request can be provided based on said acquired user information; and
- (f) in response to a determination that the service request can be provided based on said acquired user information, provide said collected identification information to the mobile information processor.

Claim 33 (previously presented): The information processor of Claim 32, wherein when executed by the processor, the instructions cause the processor to register position information of the mobile information processor.

Claim 34 (currently amended): An information processor comprising:

a processor; and

a memory device which stores instructions, which when executed by the processor, cause the processor to:

- (a) perform data communication with: (i) a mobile information processor; and (ii) an external apparatus including identification information;
- (b) acquire user information which is stored by a remote user information database, said acquisition being based on said identification information;
- (c) receive a service request from the external apparatus based on the acquired user information;

- (d) determine whether a communication service can be provided based on: (i) said acquired user information; and (ii) said identification information; and
- (e) in response to a determination that the communication service can be provided based on: (i) said acquired user information; and (ii) said identification information, provide the communication service to the mobile information processor.

Claim 35 (previously presented): The information processor of Claim 34, wherein when executed by the processor, the instructions cause the processor to transmit the identification information to the mobile information processor.

Claim 36 (previously presented): The information processor of Claim 34, wherein when executed by the processor, the instructions cause the processor to:

- (a) before transmitting the identification information, perform authentication processing by challenge response;
- (b) perform challenge transmission; and
- (c) receive encrypted data of the challenge transmission created by a secret key of the external apparatus and a public-key certificate as a response from the mobile information processor.

Claim 37 (previously presented): The information processor of Claim 34, wherein when executed by the processor, the instructions cause the processor to perform Bluetooth wireless communication.

Claim 38 (currently amended): A data communication system comprising:

a mobile apparatus including:

- (a) a first processor; and
- (b) a first memory device storing instructions, which when executed by the first processor, cause the first processor to collect identification information of an external apparatus which can ~~communication~~ communicate with the mobile apparatus;

a personal directory including:

- (a) a second processor; and
- (b) a second memory device storing instructions, which when executed by the second processor, cause the second processor to:
  - (i) perform data communication with: (A) the mobile apparatus; and (B) the external apparatus;
  - (ii) acquire user information which is stored by a remote user information database, said acquisition being based on said identification information;
  - (iii) receive a service request from the mobile apparatus through a network based on the acquired user information;
  - (iv) determine whether a communication service can be provided based on: (i) said acquired user information; and (ii) said identification information; and
  - (v) in response to a determination that the communication service can be provided based on: (i) said acquired user information; and (ii) said identification information, provide the communication service to the mobile apparatus.

Claim 39 (previously presented): The data communication system of Claim 38, further comprising a service provider, wherein the service provider provides a second communication service based on information obtained from the personal directory.

Claim 40 (previously presented): The data communication system of Claim 38, further comprising a space directory server which stores the identification information of the external apparatus.

Claim 41 (previously presented): The data communication system of Claim 40, wherein the communication service providing process is performed through a service provider.

Claim 42 (previously presented): A method of operating a mobile information processor including instructions, the method comprising:

- (a) causing a processor to execute the instructions to access a space directory which stores identification information of an external apparatus;
- (b) causing the processor to execute the instructions to transmit, in response to a transmission challenge from the space directory, encrypted data of the challenge created by its own secret key together with a public-key certificate to the space directory;
- (c) causing the processor to execute the instructions to receive the identification information of the external apparatus from the space directory;
- (d) causing the processor to execute the instructions to acquire user information from a remote user information database based on said received identification information;
- (e) causing the processor to execute the instructions to transmit, to a service provider, the acquired user information, said service provider being configured to determine whether a communication service can be provided based on said acquired user information transmitted to said service provider; and
- (f) in response to a determination that the communication service can be provided based on said acquired user information transmitted to said service provider, utilize said communication service.

Claim 43 (previously presented): The method of Claim 42, which includes causing the processor to execute the instructions to communicate with a personal directory which stores original data of the identification information of the external apparatus so as to register position information of the mobile information processor in the personal directory.

Claim 44 (previously presented): A method of operating a mobile information processor including instructions, the method comprising:

- (a) causing a processor to execute the instructions to search, in a local area, for an external apparatus which can communicate with the mobile information processor, said external apparatus including identification information;
- (b) causing the processor to execute the instructions to collect said identification information of said external apparatus;
- (c) causing the processor to execute the instructions to acquire user information from a remote user information database based on said collected identification information of the external apparatus;
- (d) causing the processor to execute the instructions to transmit, to a service provider, the acquired user information from the remote user information database, said service provider being configured to determine whether a communication service can be provided based on said acquired user information transmitted to said service provider; and
- (e) in response to a determination that the communication service can be provided based on said acquired user information transmitted to said service provider, causing the processor to execute the instructions to utilize said service communication service.

Claim 45 (previously presented): The data communication method of Claim 44, which includes causing the processor to execute the instructions to obtain the identification information from a space directory server which stores the identification information.

Claim 46 (previously presented): The data communication method of Claim 44, which includes transmitting the communication service request through the service provider.

Claim 47 (currently amended): A data communication method comprising:

- (a) causing a mobile apparatus to collect identification information of an external apparatus which can ~~communication~~ communicate with the mobile apparatus in a local area; and
- (b) causing a personal directory to:
  - (i) perform data communication with: (A) the mobile apparatus; and (B) the external apparatus;
  - (ii) acquire user information which is stored by a remote user information database, said acquisition being based on said identification information;
  - (iii) receive a service request from the mobile apparatus through a network based on the acquired user information;
  - (iv) determine whether a communication service can be provided based on: (i) said acquired user information; and (ii) said identification information; and
  - (v) in response to a determination that the communication service can be provided based on: (i) said acquired user information; and (ii) said identification information, provide the communication service through the external apparatus to the mobile apparatus.

Claim 48 (previously presented): The data communication method of Claim 47, which includes receiving the service request through a service provider.



Claim 49 (previously presented): A computer readable medium storing instructions structured to cause a mobile information processor to:

- (a) access a space directory which stores identification information of an external apparatus;
- (b) transmit, in response to a transmission challenge from the space directory, encrypted data of the challenge created by its own secret key together with a public-key certificate to the space directory;
- (c) receive the identification information of the external apparatus from the space directory;
- (d) acquire user information from a remote user information database based on said received identification;
- (e) transmit, to a service provider, the acquired user information, said service provider being configured to determine whether a communication service can be provided based on said transmitted user information; and
- (f) in response to a determination that the communication service can be provided based on said transmitted user information, utilize said communication service.

Claim 50 (previously presented): A computer readable medium storing instructions structured to cause a mobile information processor to:

- (a) access, from a local area, an external apparatus which includes identification information;
- (b) transmit, in response to a transmission challenge from the external apparatus, encrypted data of the challenge created by its own secret key together with a public-key certificate to the external apparatus;
- (c) receive the identification information from the external apparatus;
- (d) acquire user information from a remote user information database based on said received identification information;
- (e) transmit, to a service provider, the acquired user information, said service provider being configured to determine whether a communication service can be provided based on said transmitted user information; and

- (f) in response to a determination that the communication service can be provided based on the said transmitted user information, utilize said communication service.

Claims 51 to 53 (canceled).

Claim 54 (previously presented): The mobile information processor of Claim 26, wherein said external apparatus includes an access point.